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ABSTRACT

The performance of the Peninsula Academies of Electronics and Computer Technology was assessed for the program's third year of operation in two host schools in the Sequoia Union High School District. Data were collected for approximately 190 Academy students and for a comparison group of non-Academy students. Academies students missed fewer days of school, and on the average earned as many or more credits toward high school graduation. Academy students achieved higher pass rates on the district proficiency tests in reading, mathematics, and writing, and had higher average scores on all but one test at one grade level. For Academy students, the overall rate of attrition for 1983-84 was lower than that for either of the two preceding years, in spite of a very high attrition rate for 10th grade electronics students. The school dropout rates for Academy versus non-Academy 10th grade students were about the same, but at the 11th and 12th grade levels, only about one-third as many Academy students dropped out. The school and industry personnel surveyed rated the concept of the program at 6.9 and the program as implemented at 5.5 on a 7-point scale. Students also rated the program highly. Representative parents of 10th graders were interviewed, and the majority rated the program "good" or "excellent." The work experience component was one of the most successful aspects of the program. Recommendations were made regarding equipment, communications, motivation, mentors, and work experience. (YLB)

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The Peninsula Academies
Third Yearly Interim Report

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I. Introduction

The Peninsula Academies of Electronics and Computer Technology were born three years ago and this June sent their first graduates out into the worlds of work and higher education. In the past two years, the program has been recognized for its innovative educational approaches and achievements, in 1983 receiving the California School Board Association's Golden Bell award for meritorious programs and being designated one of eleven exemplary education technology programs statewide. In 1984, the Academies were honored with the J. Russell Kent Award, presented by the San Mateo County School Boards Association to a selected few programs deserving of special attention and support.

This report assesses the accomplishments of the Peninsula Academies during the 1983-84 school year, the program's third year of operation in the Sequoia Union High School District (SUHSD). It includes information on program management as well as on selected outcomes and is intended to be used by the Academy managers as they review the program's progress toward meeting its goals and plan improvements for the coming years.

Brief Description of the Peninsula Academies in Year Three

A year of "firsts." With three grade levels enrolled at both Academy sites, 1983-84 was the first year of full implementation for the program. This year also marked the first experience with summer jobs for juniors and spring semester work experience for seniors. Another first was the introduction of team teaching in science and electronics for the sophomore and junior classes. The idea behind this innovation was to integrate the course content more effectively and also to allow the two teachers (and their classes) to benefit from each other's strengths--first-hand experience in industry on the one hand and expertise in teaching on the other.

The basic structure of the Academies remained unchanged from last year. Sophomores and juniors for the most part were scheduled into their "lab" class (electronics or computers) and into three academic classes (English,

math, and science) taught by Academies staff.* Seniors usually took only one Academy class--electronics or computer technology laboratory--and rounded out their programs with electives or courses required for graduation. (The typical Academy senior enrolled in six classes, usually including English, social science, and either fine arts or industrial arts.)

Staff. The staff at each Academy for the 1983-84 school year consisted of a counselor (one-fourth time) and five teachers: an English teacher (who served also as Department Chairperson at the Electronics Academy), a math teacher, a science teacher (who served also as Department Chairperson at the Computer Academy), and two laboratory instructors. A classroom aide was also available at each site.

Once again this year, there were new teachers and mid-year staff changes. The Computer Academy began the year with a new lab instructor and a new English teacher. Then, at mid-year, the program lost its math teacher and the senior-year lab instructor. A new teacher was brought in for math, and the classroom aide was given full responsibility for the senior computer classes. Overall, by the end of the year, the "average" Computer Academy staff member had been with the program for 1.8 years; only one teacher had been with the program since it began.

The Electronics Academy also experienced staff changes, although average tenure with the program was longer--about 2.2 years. The math teacher was new to the program in the fall, and the lab instructors were re-assigned at mid-year. Also, early in the school year, the electronics stockroom clerk/aide left and was not replaced.

Eighteen class sections were offered by the Computer Academy, some of which had "mixed" Academy and non-Academy students. The average class size was 20 students, with academic classes averaging about 22 students and the computer labs about 16 students. The Electronics Academy, with a smaller

* Block scheduling was more common for Electronics Academy students than for Computer Academy students, who were enrolled in a wider range of math and science classes.

enrollment, offered 13 class sections with an average class size of 21 students. Academic classes averaged 22 students, and electronics labs about 20 students.

Students. The Academies began the fall semester this year with a total enrollment of 189 students. Five additional students were enrolled at the beginning of the second semester. Table 1 shows the profile of student enrollment by grade level and ethnicity at each Academy and overall.

Funding. Financial support for the program continued to come from three sources: foundation grants, corporate donations, and state or federal grants to the school district. The largest portion of the support continued to come from foundation grants. However, considerable effort was made this year by program management from the SUHSD, the Stanford Mid-Peninsula Urban Coalition (UC), and industry to get the program on a more stable financial footing. In addition to generating monetary support from local industry and foundations, the Academies Director and the district Director of Special Projects worked with the area's state assemblymen to draft legislation that would provide state funding for replications of the Academies. This legislation is currently in committee in Sacramento and should come up for a final vote by fall of this year.

Scope of the Report

Data sources. This report follows the format of the first and second annual evaluation reports and is based on two kinds of information: extant data and survey data. Extant data refers to information on student outcomes such as attendance and grades that are collected by the school district or by the Academies teachers. These data are summarized in Chapter II. The survey data, which are summarized in Chapter III, include responses to structured interviews with school and industry personnel, parents, and students, as well as results from questionnaires completed by the students.

Comparison groups. The section on extant data includes comparisons between performance of the Academies students and that of a group of non-Academies students enrolled in SUHSD. Because the Academies exist not in a laboratory but in a "real life" school situation, it is impossible to

Table 1

Peninsula Academies Student Profile
Initial Enrollment for 1983-84 School Year

12th Grade	ELECTRONICS ACADEMY 18 students Total	%	COMPUTER ACADEMY 25 students Total	%	OVERALL 43 students Total	%
SEX						
Male	11	61%	9	36%	20	47%
Female	7	39%	16	64%	23	53%
ETHNIC						
Black	3	17%	20	80%	23	53%
Hispanic	6	33%	—	--	6	14%
Pacific Islanders	2	11%	—	--	2	5%
White	7	39%	5	20%	12	28%
Total Minority	11	61%	20	80%	31	72%

11th Grade	28 students Total	%	36 students Total	%	64 students Total	%
SEX						
Male	21	75%	17	47%	38	59%
Female	7	25%	19	53%	26	41%
ETHNIC						
Black	8	28%	17	47%	25	39%
Hispanic	4	14%	4	11%	8	12%
Pacific Islanders	1	4%	4	11%	5	8%
East Indian	--	--	1	3%	1	2%
American Indian	1	4%	--	--	1	2%
White	14	50%	10	28%	24	37%
Total Minority	14	50%	26	72%	40	63%

10th Grade	46 students* Total	%	41 students Total	%	87 students Total	%
SEX						
Male	34	74%	25	61%	59	68%
Female	12	26%	16	39%	28	32%
ETHNIC						
Black	11	24%	20	48%	31	36%
Hispanic	14	30%	7	17%	21	24%
Pacific Islanders	1	2%	1	2%	2	2%
White	20	43%	13	32%	33	38%
Total Minority	26	57%	28	68%	54	62%

* Includes 5 who enrolled mid-year

use a true experimental/control-group evaluation design. That is, there is no possible way to randomly assign students to "Academy" and "non-Academy" groups such that any observed difference in outcomes between them can be linked confidently to participation or non-participation in the program. We have selected a comparison group for each Academy class (grade), but we cannot be sure that no differences exist between these groups of students at the outset--for example in their motivation, self-esteem, or dependability. Nevertheless, our non-Academy comparison groups were selected to resemble Academies students as closely as possible on the following dimensions:

- grade level
- feeder school (junior high) attended
- ninth grade reading and math achievement test scores
- sex
- ethnicity

At the 10th grade level, 73 non-Academy students were selected in November 1983 to act as a comparison group. For the 11th and 12th grades, the same comparison groups used last year were retained, allowing us to trace achievement and attrition of the Academy and non-Academy students as they move through their high school years.

Notes on the Data

The focus of this report is on assessing progress toward meeting the Academy's stated objectives, and, where gaps between goals and achievements exist, to explore the reasons for the divergence so that the Academy's management can make adjustments in the program or re-think and re-formulate the objectives. The goals and objectives agreed upon at the program's outset are shown in Figure 1.

The scope of this report does not include the Academy's goals involving fund-raising, institutionalization, or replication, but focuses on the management and implementation of the program at the school level.

PENINSULA ACADEMIES

Program Goals

1. To serve an educationally disadvantaged and largely minority population of students who may not be succeeding in traditional school programs, may drop out, and who lack employable skills.

2. To meet the vocational training needs of such students for skilled and semi-skilled positions with local companies, and to satisfy partially the needs of employers for employees in the selected fields of training.

3. To confront the problem of youth unemployment among the target population, and to establish a model of possible use in other schools, districts, and localities.

Program Objectives

Students

1. To exhibit improved attitudes toward school and learning.

2. To exhibit improved academic performance.

3. To exhibit improved self-esteem.

4. To complete the three-year Academies program and develop skills adequate for skilled and semi-skilled positions in electronics or computer operations in local companies.

5. To gain knowledge of the world of work and skills in choosing a suitable career path.

6. After graduation, to find satisfactory employment and succeed on the job, or enroll in a program of postsecondary training.

Parents

1. To be knowledgeable of the Academies program and its objectives and requirements.

2. To support their children in the decision to enter the program and in their efforts in completing the program.

3. To assist the teachers in dealing with behavior/motivation problems that may occur.

4. To provide support to various other program activities.

School Personnel (Teachers, Counselors, and Administrators)

1. To contribute to the planning and definition of the program.

2. To provide the necessary facilities for the Academies. (Administrators)

Figure 1. Peninsula Academies Goals and Objectives

3. To provide an effective curriculum for the Academies, in conjunction with industry and the Coalition. (Teachers)

4. To provide academic instruction for the program related to the vocational instruction, that will improve basic skills and that will meet the district's proficiency objectives in English (reading and writing), mathematics, and science. (Teachers)

5. To provide students with career guidance. (Counselors)

6. To provide the necessary high-level support within the schools and district and contribute to the program's long-term stability. (Administrators)

Private Sector Representatives

1. To contribute to the planning and definition of the program, including effective technical curricula, to ensure that students receive training appropriate for beginning positions.

2. To contribute financial resources to the program.

3. To provide the necessary industrial instructors and mentors for the program.

4. To help provide the necessary equipment and materials for the program.

5. To provide on-site training opportunities for students.

6. To provide employment opportunities for qualified program graduates.

7. To exhibit knowledge of and support for the program to others, expand the private sector participation in the program, and promote the long-term stability of the program.

Coalition Staff

1. To provide the necessary organization to plan and develop the program and the management and support to maintain it [for the field test period].

2. To obtain from industry those contributions necessary for the development and ongoing support of the program.

3. To obtain from the schools those contributions necessary for the development and ongoing support of the program.

4. To bring together industry and the schools into a working partnership and foster the institutionalization of this partnership and the program.

5. To ensure the presence in the program of basic defining elements: integration of academic and vocational instruction, individualization of instruction, motivational components, and career counseling.

6. To develop and use an effective monitoring and feedback system for the program (in conjunction with the schools).

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In examining the information presented, the following points should be kept in mind:

- Comparisons between Academies groups and all students at the host high schools should be viewed with the understanding that the Academy students were selected in part because they were in some way educationally or economically disadvantaged, tended to be underachieving academically, and/or were thought to be at risk in terms of completing high school.

- Attendance data, grades, and proficiency test results were collected only for those Academy students who stayed in the program for the whole year. Students who dropped out of the program midyear were interviewed by telephone, but only students who completed the year as Academy students were asked to complete a written questionnaire. Monthly attendance figures include all students enrolled in the program for the month in question, regardless of whether they eventually dropped out.

- Percentages are calculated for each item based on the number of respondents for that item, not including those who responded "don't know" or the equivalent. All percentages have been rounded to the nearest whole number.

- With few exceptions, information is presented for the two Academies combined. Results are reported separately only where meaningful differences between the two Academies emerged.

- Trends and comparisons across the three years of the program's existence are reserved for the Final Evaluation Report, which will be completed in December 1984.

II. Extant Data

Among the questions this evalution report addresses are those pertaining to student outcomes at the school level:

- Do Academies students have satisfactory attendance records?
- Does the Academies program have a positive impact on the students' overall academic progress?
- Do Academies students complete high school graduation requirements, such as passing proficiency tests?
- Do Academies students persist in the program?

To obtain a basis for answering these questions, we will compare Academies students' performance on a number of indicators with the performance of a carefully matched group of students who were enrolled in SUHSD high schools at the time the Academies students entered the program. The indicators we will use are daily attendance, school credits earned, proficiency test results, and attrition rates.

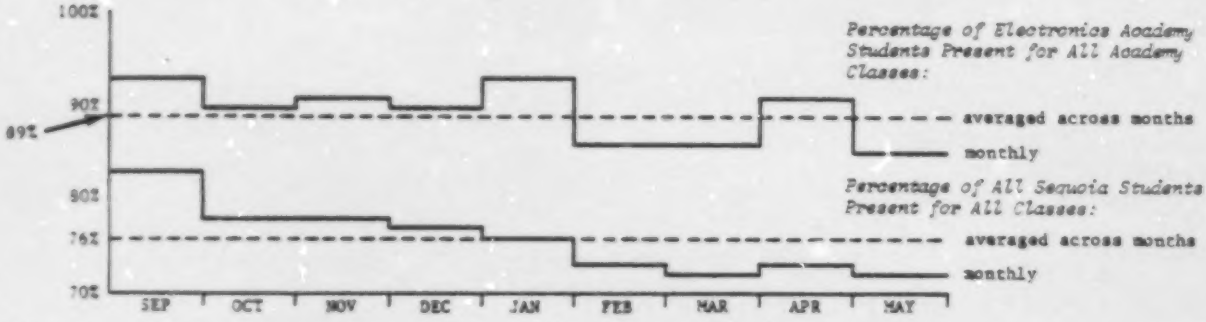
Attendance

In this section we compare the attendance of Academies' students first to that of all students enrolled in their host high school and second to that of the matched comparison group.

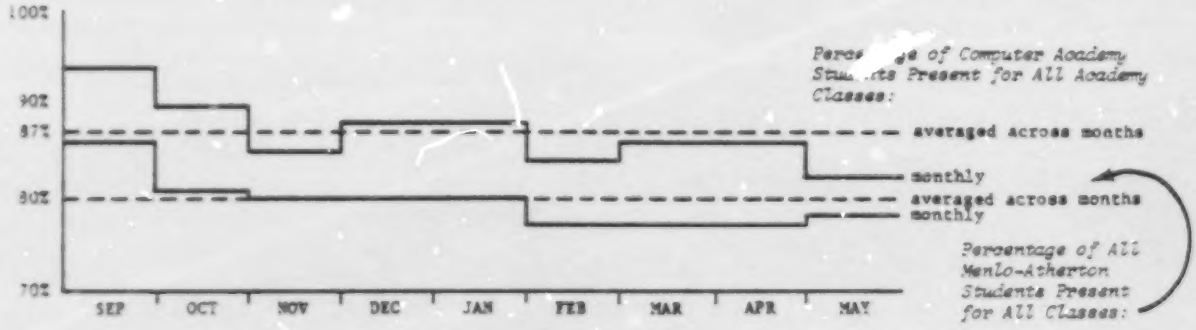
Figure 2 compares the attendance rates month by month for the 1983-84 school year of 10th and 11th grade Academies students and all students at Sequoia and Menlo Atherton High Schools. The figures represent the average percentage of students who were present for all their classes for each month. The absence rate calculated for this table included students absent one or more periods each day for any cause, excused and unexcused. (The percent absent for an unexcused reason would, of course, be much lower. For example, for Sequoia High School in May, the total absence rate was 28%, but the unexcused rate was 19%.) The school-wide figures were calculated by SUHSD; the Academy figures were calculated by AIR on the basis of attendance

sheets completed by Academies teachers. The graphs do not include data on Academies' 12th grade students, because they are enrolled in only one Academy class daily, and attendance sheets could not be collected from their "regular" class teachers.

Comparison of Attendance Rates Between Electronics Academy 10th and 11th Grade Students and All Students at Sequoia High School, 1983-84 School Year*



Comparison of Attendance Rates Between Computer Academy 10th and 11th Grade Students and All Students at Menlo-Atherton High School, 1983-84 School Year*



*Absences represent periods missed for any reason, including health as well as cuts, suspensions, etc.

Figure 2. Comparison of Attendance Rates

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The graphs for both Academies show higher attendance rates for Academies students compared to their school-mates. The figures for the Academies may be somewhat inflated because they are based on only four class periods (English, math, science, and lab) rather than the full five or six period school day. However, even if the actual differences were more modest, this would indicate a success for the program because most Academies students had a prior history of poorer than average attendance, and many were considered doubtful candidates for staying in school at all.

Table 2 compares the attendance rates of Academies students in all three grades with those of their matched comparison groups. For each set of students, we show the average number of days with one or more periods "cut" and the percent of school days with "cuts."

Table 2

	Average Number of Days Enrolled	Average Number of Days Cut(a)	Average Percentage of Days Cut
Grade 10			
Academy (N=67)	175	24	14%
Non-Academy (N=72)	172	21	12%
Grade 11			
Academy (N=56)	175	17*	10%
Non-Academy (N=57)	168	32*	19%
Grade 12			
Academy (N=28)	173	23	13%
Non-Academy (N=16)	166.5	22	13%

*The difference between these averages is significant ($p < .01$).

(a) Includes: Partial Cuts, Full Cuts, Uncleared, Unexcused, Partially Unexcused, and Suspended.

These figures may underestimate the attendance rates for Academy students, because attendance or non-attendance in regular classes is counted for former Academies students who were dropped from the program mid-year. The data show no significant differences in attendance rates between the groups in 10th and 12th grades. However, at the 11th grade level, the lower

number of "Cut" days for Academy students is significant, with the probability of the difference occurring by chance being less than one out of 100.

Credits

Table 3 below compares the average number of credits (or units) completed by the Academy and matched non-Academy groups during the fall and spring semesters, 1983-84. It also shows the mean number of "No Credits" (NCs) received by each group. A mark of NC is given to students who do not complete a course with a grade of 'D' or better."

Table 3

Average Number of "No Credits" and Number of Units Completed,
Fall 1983 and Spring 1984 Semesters
Academy and Non-Academy Students

	Fall			Spring		
	N	Average # NCs	Average # Units	N	Average # NCs	Average # Units
Grade 10						
Academy	72	1.28	24.64	65	1.20	25.77
Non-Academy	70	.83	25.56	69	.96	24.40
Grade 11						
Academy	59	.73	27.34	54	.44*	28.51*
Non-Academy	46	.89	25.53	47	1.26*	21.24*
Grade 12						
Academy	42	.57*	28.26*	25	.36	25.18
Non-Academy	11	.82*	24.18*	11	.20	23.68

* Indicates a significant difference between groups.

At the 10th grade level, there were no statistically significant differences between groups for either credits or NCs received. However, at the 11th grade the Academy groups earned a significantly higher number of credits ($p < .001$) and had significantly fewer NCs ($p < .01$). At the 12th grade level in the fall semester the Academy students again earned a significantly higher number of credits ($p < .05$) and a lower number of NCs ($p < .02$).

Proficiency Tests

To graduate from high school in the SUHSD, all students must pass district tests demonstrating their proficiency in reading, writing, and mathematics.* The pass rates on these tests for Academy students are a strong indicator of the academic effectiveness of the program.

Table 4 shows the pass rates of Academy students and their matched comparison groups, by grade level, for each of the three district tests.

Table 4

Proficiency Test Pass Rates
Academy and Non-Academy Students, 1984

		Number/Percent Passing		
	N	Reading Proficiency	Math Proficiency	Writing Proficiency
Grade 10				
Academy	70	57/81%	49/70%	51/73%
Non-Academy	73	50/68%	40/55%	44/60%
Grade 11				
Academy	58	54/93%	48/83%	48/83%
Non-Academy	54	49/91%	38/70%	39/72%
Grade 12				
Academy	29	29/100%	28/97%	29/100%
Non-Academy	14	13/93%	13/93%	13/93%

At all grade levels and for all tests, Academy students out-performed the non-Academy comparison students. For the 10th grade reading and math proficiency tests, the differences in pass rates approach statistical significance ($p < .15$).

Table 5 contains the average scores and standard deviations for the Academy and non-Academy groups on the three proficiency tests. Academy students had higher average scores on the tests at all grade levels except for the 12th grade, where the non-Academy students had a higher average

* Starting with the class of 1985, students will also need to pass science proficiency tests.

score on the Math Proficiency Test. For the Reading Proficiency Test in 11th grade, the higher mean score for Academies students is statistically significant ($p < .05$).

Table 5

Proficiency Test Average Scores and Standard Deviations
Academy and Non-Academy Students, 1984

	Reading		Math		Writing	
	Average	S.D.	Average	S.D.	Average	S.D.
Grade 10						
Academy (N=70)	83.10	13.40	81.46	18.82	75.86	13.13
Non-Academy (N=71)	81.10	9.20	77.20	16.50	72.80	11.50
Grade 11						
Academy (N=58)	87.17*	6.12	83.19	13.63	74.45	13.16
Non-Academy (N=54)	83.70*	8.15	81.50	15.60	72.70	11.10
Grade 12						
Academy (N=29)	85.83	4.72	85.79	10.40	76.21	6.56
Non-Academy (N=14)	79.57	23.39	88.40	6.70	72.20	21.50

* $p < .05$

Attrition

The Academies had mixed results on student attrition from the program during this school year. Overall, 15% of the two Academies original enrollment dropped out of or were dropped from the program between September 1983 and June 1984. Table 6 on the following page shows attrition for the Academies by grade. The figures show that attrition was very low at both Academies in the 12th grade--in the combined Academies, 93% of the seniors completed the school year. Attrition was also low overall at the Computer Academy, where each class lost approximately 8% from fall to spring. However, in the Electronics Academy, both the 10th and 11th grades experienced relatively high attrition rates, bringing that Academy's average attrition across the three grades to 24%. The 10th grade class alone lost 30% of its members. Possible reasons for this relatively high attrition rate are discussed in Chapter III, in the summary of interviews with dropped students.

Table 6

Peninsula Academies Attrition, 1983-84 School Year

Electronics Academy

Grade	(a) Number Enrolled	(b) Moved Away	(c) Dropped Own Request	(d) Dropped by Program	N/% Total Dropping
10	46	--	6/13%	8/17%	14/30%
11	28	1	2	5	7/25%
12	18	--	--	1	1/6%
Combined	92	--	8/9%	14/15%	22/24%

Computer Academy

10	41	1/2%	--	3/7%	3/7%
11	36	2/6%	1/3%	2/6%	3/8%
12	25	1/4%	2/8%	--	2/8%
Combined	102	4/4%	3/3%	5/5%	8/8%

Combined Academies

10	87	1/1%	6/7%	11/13%	17/20%
11	64	2/3%	3/5%	7/11%	10/16%
12	43	1/2%	2/5%	1/2%	3/7%
Combined	194	4/2%	11/6%	19/10%	30/15%

Table 7 shows the attrition for both Academies for each of the last three years, 1981-84.

Table 7

Peninsula Academies Combined Attrition
in First Three Years

	Percent Dropping Out of Program		
	1981-82	1982-83	1983-84
Computer Academy	26%	21%	8%
Electronics Academy	49%	26%	24%
Combined Academies	37%	23%	15%

Despite the high loss of 10th grade students (a pattern repeated from the first two years of the program), the Academies show a steadily declining number of dropouts over their three-year history.

Table 8 compares the number and percent of Academies and matched non-Academies students who dropped completely out of school during the 1982-83 school year. (These figures do not include students who transferred to other schools.)

Table 8

Number and Percent of School Dropouts,
Grade Academy and Non-Academy Students
1983-84

	Number Entering Fall 1983	Dropped Out of School	
		Number	Percent
Grade 10			
Academy	87	3	3%
Non-Academy	71	3	4%
Grade 11			
Academy	64	2	3%
Non-Academy	60	9	15%
Grade 12			
Academy	43	3	7%
Non-Academy	17	4	24%

The difference in the school drop-out rate is dramatic in the 11th and 12th grades, with the non-Academies students having approximately three times the Academies' drop-out rate.

III. Survey Data

Students, parents, school personnel, and representatives of the private sector were surveyed to assess how the Academies program is operating from their points of view. Through personal interviews and written questionnaires, information was gathered to answer these evaluation questions:

Students:

Did the students experience an improved attitude toward school? An increase in self-confidence or self-esteem?

Did students develop academic and technical skills that prepare them for entry-level jobs in electronics and computer technology?

Did students gain knowledge of career possibilities and the personal characteristics needed to embark on careers?

Did students improve their school performance?

Parents:

Do the parents understand what the Academies program is all about?

Did parents support their children and the Academies teachers?

School Personnel:

Did school personnel contribute to the planning and management of the program?

Were the necessary facilities and teaching materials provided?

Were the curriculum and instruction effective for both the academic and vocational classes?

Did teachers and counselors provide useful guidance to students regarding vocational and academic plans of students?

Did school and district administrators support the program?

Did the Academies staff provide individual instructional assistance and integrated academic and vocational courses?

Private sector:

Did industry employees contribute to planning and defining the program?

Did industry provide mentors, instructors, and other needed personnel?

Did industry provide adequate employment opportunities for juniors and seniors?

Coordination of school-business collaboration:

Was the program well managed and organized?

Were schools and industry brought together in a working partnership?

Did UC staff efficiently coordinate field trips, work experience, and the mentor program?

The following paragraphs contain answers to these questions.

Students

Questionnaires were administered to Academy students at all grade levels and to seniors at the end of their summer and spring semester work experiences; also, telephone interviews were conducted with students who dropped out of the program. The results of these surveys are presented here.

Student questionnaires. In late spring the AIR evaluation consultant administered the 23-item questionnaire that was used in the two previous Academy evaluations. Completed questionnaires were returned by 150 out of 162 students, or 93% of those enrolled. (The non-respondents were absent the day the questionnaires were administered.) Before students marked their responses, the administrator explained that the survey would be confidential, read each item aloud, and answered questions about the items.

Students were asked to rate their general response to the program; 75% said they liked the Academy better than the regular school program:

	Much Better	Slightly Better	About The Same	Slightly Worse	Much Worse
Overall, compared to the regular program, how well have you liked the Academy program?	81/54%	31/21%	20/13%	10/7%	7/5%

More specifically, we asked if the students liked the Academy schedule and classes and how these fit into their overall high school program. While 16% said they did not like the way the Academy schedule was handled, 47% said they liked it, and the rest had no particular opinion about it.

A large majority of the students said the program had a positive influence on their attitude toward school and learning and their own self-esteem. Results were compiled separately by grade level (although only aggregated data are presented in the tables below), and the most positive changes were reported by juniors and seniors, 95% of whom reported an increase in their interest in learning.

	Strongly Increased	Slightly Increased	No Effect	Slightly Decreased	Strongly Decreased
Has the Peninsula Academies program influenced your feelings about school and learning, (for example, your desire to study, your grades, your attendance, etc.)	81/55%	51/35%	9/6%	3/2%	3/2%

	Feel Much Better	Feel a Little Better	No Effect	Feel a Little Worse	Feel Much Worse
Has the Peninsula Academies program caused you to feel differently about yourself (for example, your confidence about school, friends, future, etc.)	64/43%	48/33%	34/23%	2/1%	--

Compared to the 1983 responses, students this year report more positive changes in their attitudes toward school but fewer changes in their attitudes toward themselves (last year 13% reported "no effect" on self-esteem compared to 23% this year).

This year 49 students (33%) said they changed high schools within the district to participate in an Academy program. We asked these students if they liked the change of schools. Responses for both Academies were nearly identical and are aggregated here:

	Like It	No Opinion	Don't Like It
How do you like the change in schools?	20/41%	20/41%	9/18%

This is a notable improvement over last year, when 32% said they liked the change and 29% said they did not.

Students were also asked to rate the quality of the Academies' facilities, equipment, and materials.

	Excellent	Good	Average	Poor	Terrible
How would you rate the quality of the:					
Facilities	21/14%	57/38%	55/37%	10/7%	5/3%
Books/Learning Materials	26/17%	62/42%	53/36%	7/5%	2/1%
Equipment:					
Computer Lab	27/31%	39/45%	18/21%	3/3%	—
Electronics Lab	3/5%	17/27%	28/44%	13/21%	2/3%

Ratings of classroom facilities and learning materials were nearly the same for the two Academies, but very different regarding the quality of the lab equipment. Students at the Computer Academy were generally satisfied with the equipment (76% rated it Excellent or Good; only 3% called it Poor). However, at the Electronics Academy, many students found the equipment outmoded, poorly maintained, and generally inadequate (only 32% called it Excellent or Good; 24% said it was either Poor or Terrible).

We also asked students to rate the quality of instruction in both the laboratory and academic classes.

	Excellent	Good	Average	Poor	Terrible
How would you rate the quality of the:					
Lab Instruction	53/36%	55/36%	30/20%	11/7%	1/1%
Academic Instruction:					
English	43/38%	49/43%	20/18%	--	2/2%
Math	21/19%	32/30%	30/28%	14/13%	11/10%
Science	29/30%	31/32%	27/28%	8/8%	1/1%
Overall	27/24%	47/41%	34/30%	4/4%	1/1%

Converting the "Excellent to Terrible" ratings to a scale of 5 to 1, we find the overall rating for quality of academic instruction to be 3.6 at the Computer Academy and 4.1 at the Electronics Academy. Ratings of instruction by grade level and subject matter are not presented here, but these were calculated for the benefit of program administrators; they showed that the highest ratings were for the English classes (10th grade Computer Academy and 11th grade Electronics Academy) and for the 10th grade computer lab. The lowest ratings were for 10th grade math (at both Academies) and for the 10th grade electronics lab. These differences correlated well with educators' ratings of the quality of instructional planning and with the school personnel comments on staff turnover and problem areas in the instructional program. (See the summary of the school personnel survey later in this chapter.)

We also asked the students about two important program components: the inclusion of career-related activities such as field trips, speakers, and class discussions about work and jobs; and the availability of extra individual instruction or tutoring.

	At least once a week	Once or twice a month	Once or twice a semester	Not at all
How often have you had activities that are different from your regular lessons (examples were provided)?	10/7%	31/21%	94/63%	13/9%

	At least once a week	Once or twice a month	Once or twice a semester	Not at all
How often have you received individual instruction in your Academy classes (examples were provided)?	80/54%	19/13%	25/17%	25/17%

	Very Useful	Somewhat Useful	OK	Not Useful	Wasting Time
How useful were the career-related activities?	46/34%	45/34%	32/24%	5/4%	4/3%
How useful was the individual instructional attention?	59/48%	32/26%	27/22%	4/3%	3/2%

Compared to the first two years of the program, students reported having fewer special job-related activities in 1983-84. For example, this year 9% said they "never" had such activities, compared to 3% who gave that response last year; also 63% said they had such activities as seldom as once or twice a semester this year, compared to 50% last year.

Regarding the availability of tutoring and individual instruction, the table above shows that a large majority of students recognized that such help was available to them. We also asked the students if their need for such assistance was satisfied by the program; 67% said that it was and 28% said it was not.

Tenth and 11th grade students were asked about the extent to which the content of their academic courses was related directly to that in their laboratory courses. Because responses were very different between the Academies, they are reported separately here:

	At least once a week	Once or twice a month	Once or twice a semester	Never
How often have your Academy academic classes taught you things directly related to your lab classes?				
Electronics Academy	24/50%	9/19%	6/12%	9/19%
Computer Academy	15/21%	12/18%	15/23%	22/33%
Total Combined	39/33%	21/18%	21/13%	31/26%

It seems that the classes are more inter-related at the Electronics than at the Computer Academy. This conclusion is supported by the results of the school personnel interviews reported later in this chapter, and may reflect a difference in objectives between the two programs.

Enhancing student awareness of careers is an important objective of the Academies. Students were asked about their plans after high school.

	Yes	No	No Response
Do you have specific plans for what to do after you graduate?			
Grade 10	56/86%	9/14%	--
Grade 11	41/84%	8/16%	--
Grade 12	34/94%	2/6%	--
If yes, do you expect to be able to use your Peninsula Academy training in this activity?			
Grade 10	46/81%	8/14%	3/5%
Grade 11	39/95%	2/5%	--
Grade 12	31/91%	3/9%	--

Responses to these questions did not differ much across grade levels, although 12th graders were more specific when asked to indicate which of a list of possible activities they are planning. Most seniors had plans either to get a job (15%), go to a junior college or college (3%), or a combination of these two activities (66%).

The students continued to take advantage of the Academies counseling program in the 1983-84 school year. In the Academies first year, 63% of the students said counseling was available to them, in the second year, 73%; this year everyone recognized that counseling was available and 86% said they saw the counselor at least once during the school year for assistance in planning or problem solving. (In addition, 72% of the students said they consulted an Academies teacher for such assistance.) The table below shows the number and percent of students who consulted the counselor or a teacher for counseling, by the number of such consultations during the year.

	Frequency (times per year)					
	0	1-5	6-10	11-20	20+/ Many	Not Sure
Consulted Counselor	23/15%	93/62%	17/11%	9/6%	5/3%	3/2%
Consulted Teacher	41/27%	69/46%	16/11%	8/5%	14/9%	2/1%

	Yes	No	Not Sure
If consulted, was advice helpful?			
Counselor	93/73%	10/8%	23/18%
Teacher	83/76%	10/9%	17/16%

Students were also asked where they went for guidance or information on careers and gave the following responses:

	Source Consulted	N/% Students
The last time you wanted information or guidance on careers, who did you ask?		
	Parents	84/56%
	Academy teacher	81/54%
	School Counselor	66/44%
	Mentor, co-worker, supervisor	31/21%
	Friend or relative	29/19%
	School career center staff	22/15%

The data show that the large majority of students sought the advice of teachers and counselors, and about 75% of them also reported that they were satisfied with the assistance they received. As of this writing, the SUHSD is planning to curtail or eliminate the counseling program for the entire district. Since Academies teachers are already heavily involved in counseling, it is difficult to estimate how well the students' counseling needs will be filled next year.

The mentor program continued this year, with all eleventh graders being paired with an industry employee early in the fall semester. Eleventh-grade students were asked about their experience with the mentor program. (Forty-eight of the 49 juniors said they had a mentor this year.) The students were asked how helpful their mentors had been.

Very Helpful	Somewhat Helpful	OK	Not Very Helpful	A Bad Experience	No Response
17/36%	10/21%	9/19%	10/21%	1/2%	1/2%

The mentor program was well received for the most part (57% said their mentors were helpful), but many students had a negative experience with the program, nevertheless. Twelve of the students who were not happy with the program said they never saw their mentors or only met with them once during the year. These students expressed disapppointment and even annoyance about being neglected by their mentors. As one commented, "We shouldn't have mentors if they don't help."

The students were also asked to name their most successful or favorite activity with their mentors. By far the most preferred activity (59% of respondents) was visiting the mentor's company and having a chance to experiment with equipment first-hand. About 10% of the students said the best activity has having lunch or dinner together; another 10% said they liked activities such as hiking or attending a sports event. Also mentioned were visiting the mentors' homes, talking over career and college plans, getting help with math, having the mentor find the student a part-time job, and "just getting to know [him] personally."

Finally, all the students were asked to describe their most positive experience and their biggest problem related to the Academies this school year. The most frequently mentioned positive experiences were:

- learning a new technical skill (such as programming with PASCAL or using an oscilloscope)
- working in industry or being offered a job
- improving grades, passing proficiency tests, and generally performing better academically
- going on field trips, having outside speakers in class, and participating in extracurricular Academies activities
- improving self-understanding, self-confidence, and general attitude toward work and school

Students also mentioned getting to know their teachers, being chosen Student of the Month, being accepted to a post-secondary school, and working on career plans as their most positive experiences.

Fewer students (65%) listed Academies-related problems this year than last (80%). But by far the most frequently mentioned difficulties were related to school work--problems understanding math, electronics, or programming--and consequently getting poor grades. The most freqent problems were:

- poor grades and study habits and not understanding certain concepts
- not getting along with some teachers
- difficulty adjusting to mid-year changes of teachers or schedules
- other scheduling problems (such as not being able to take electives)
- boredom from seeing the same students in all classes

Other problems included not getting enough extra help, getting a late start in the spring work experience, tardiness or poor attendance, and having an inactive mentor.

In summary, the students in this year's survey were positive and enthusiastic about the Academies for the most part. A majority said they liked the overall program and that it had a positive effect on their attitudes and their academic achievement. One of the problems identified last year was dissatisfaction of students who had changed schools within SUHSD to be in an Academy. This problem seems to have diminished, with over 80% of the transferring students saying they either liked the change or did not have any special opinion about it.

Most students gave their Academy instruction high ratings, and over two-thirds also said their needs for extra help or tutoring had been met. In addition, only 17% said they never received individual instruction, compared to 27% in 1983.

Students for the most part rated the Academies' classroom facilities and materials as Average to Good, and at the Computer Academy, most said the lab equipment was Good or Excellent. However, many students were unhappy with the equipment in the Electronics Academy, which they said is out-dated and poorly maintained.

According to students, the Academies offered fewer enrichment activities this year (field trips, etc.), which may be because fewer trips were organized for seniors, lowering the average over all three classes. The objective of an inter-related academic-technical curriculum for the Academies may be evolving differently at the two Academies; according to the students, classes are linked at the Electronics Academy about once a week or more, but at the Computer Academy such integration occurs only once or twice a semester, if at all.

The career planning and general counseling components of the program were functioning well. Almost all the students were making definite career plans that included using the skills they are learning. They were frequent users of the counseling services and nearly all were pleased with the advice they received.

The mentor program appears to be very successful for some students (about 36%), but very unsatisfactory for others (about 23%). Students whose mentors neglected them were hurt and disapppointed by the experience: "I really don't like my mentor. He's not active or helpful." But on the positive side, active mentors are much appreciated by students, who made such comments as: "My mentor is a very exciting and fun person to be around. He is understanding and a very good teacher if you need advice. Thank you for giving him to me."

Junior/senior work experience. The graduating seniors in 1984 are the only group of Academies students so far to have had actual job experience in local companies through the program. They were placed in full-time jobs between their junior and senior years (summer 1983) and also worked part-time during the 1984 spring semester. We asked them for feedback on their jobs at the end of the summer and again at the end of the spring semester.

Thirty-one juniors out of a combined class of 38 were placed in summer jobs; 30 of them responded to the post-employment questionnaire. During their senior year, 31 students again were placed in work experience positions; 29 of them completed the post-employment questionnaire. The student jobs were at 15 different companies in San Mateo and Santa Clara Counties and included positions such as Production Assembler, Assistant Electronics Technician, Data Entry Clerk, and Administrative Support Staff.

We asked the seniors how useful they found the time they spent working at their companies.

Very Useful	Somewhat Useful	OK	Not Very Useful	A Waste of Time
16/53%	10/33%	2/7%	--	2/7%

The students who thought it was a "waste of time" had been placed in jobs that were not related to their Academies work.

We also asked the students if the Academies had prepared them adequately regarding the skills they needed for their jobs.

		Yes	Partly	No	No Response
Did your training at the Academies teach you the work skills you needed for your job?					
	Fall (N=30)	14/47%	12/40%	3/10%	1/3%
	Spring (N=29)	15/52%	7/24%	7/24%	—

Some of the "No" responses were again qualified by the note that the jobs were not directly related to computers or electronics and required skills such as typing, filing, or welding, which were beyond the scope of the Academies program. Other students mentioned that the jobs required specialized skills with instruments that could not be expected to be found at school.

We also asked the students to rate how well prepared they were in terms of "employability" skills, such as dealing with problems at work. Table 9 shows responses for fall 1983 and spring 1984. The assurance that students gained over the seven-month period is apparent. In the fall, most students (80% or more) felt "well" or "very well" prepared in only three areas. proper dress and speech on the job; how to deal with typical problems at work; and where to turn for advice about the job. By late spring, there were only two areas where 80% or more of the students did not feel well prepared (how to take public transportation to work and understanding employee benefits and payroll deductions). In both fall and spring, understanding employee benefits was the area in which students felt least well prepared.

Students were asked also to rate their own performance on the job and whether their supervisors had recommended them for future work at the company.

Table 9

Self-Ratings of Students on "Employability" Skills Preparation
(Percent of Students, Fall 1983 and Spring 1984)

Job Issues		Very Poorly	Poorly	Fairly Well	Well	Very Well	Doesn't Apply
How to deal with supervisors							
	Spring	3%	--	7%	26%	63%	--
	Fall	--	3%	11%	19%	56%	11%
How to take public transportation to work							
	Spring	--	3%	7%	22%	33%	33%
	Fall	3%	6%	8%	8%	17%	21%
Proper dress and speech on the job							
	Spring	--	3%	--	26%	70%	--
	Fall	--	--	6%	31%	50%	5%
How to deal with typical problems at work							
	Spring	--	--	7%	37%	56%	--
	Fall	--	--	8%	33%	47%	11%
How and when to get information at work							
	Spring	--	--	11%	33%	56%	--
	Fall	--	3%	14%	22%	47%	14%
Company policies and practices							
	Spring	7%	--	7%	26%	56%	3%
	Fall	6%	--	14%	19%	36%	25%
Employee benefits and payroll deductions							
	Spring	3%	7%	15%	30%	26%	15%
	Fall	6%	3%	31%	14%	14%	33%
Where to turn for advice about the job							
	Spring	3%	3%	3%	15%	74%	--
	Fall	3%	--	3%	31%	53%	11%

	Outstanding	Above Average	OK/ Average	Only Fair	Poor
Self-rating of job performance:					
Fall	9/30%	14/47%	7/23%	--	--
Spring	11/38%	11/38%	7/24%	--	--

	Yes	No	Not Sure	No Response
Did your employer recommend you for future work at the company?				
Fall	26/87%	1/3%	3/10%	--
Spring	22/76%	3/10%	2/7%	2/7%

(The student worker evaluation forms that were completed by industry supervisors at the end of the summer showed the students' self-ratings to be accurate. The supervisors rated the overall performance of about 40% of the students as Very Good, 25% as Outstanding, and the rest as Good.)

Finally, we asked students about their biggest success and worst problem on the job. In both fall and spring, the most frequently mentioned success on the job had to do with learning to do a technical job well or learning a new skill. In the fall, students almost as frequently mentioned working well with adult co-workers and supervisors as a source of satisfaction. By spring, the second-most-frequently mentioned job "success" was the sense of satisfaction from a job well done--the feeling of being helpful and useful to the employer.

The most frequently mentioned problem areas after the summer jobs were:

- not being able to work as long or as much as desired
- not using the skills learned at the Academies
- having to do other people's work
- getting to work on time and working a 40-hour week
- communicating with the supervisor
- making a specific mistake on the job

After the spring work experience, the most frequently mentioned problems were:

- making a specific mistake or dealing with equipment failure on the job
- boredom or lack of prospects on a low-skill job
- getting along with co-workers or supervisors
- not being able to work fulltime
- dealing with paperwork
- transportation

Finally, we asked students for suggestions to improve the jobs component of the Academies program, and their comments highlight some of the problem areas that need to be ironed out in the coming year. While students were overwhelmingly enthusiastic about their jobs, they did point out the following:

- Jobs that are directly related to computer or electronics skills are strongly preferred over clerical or general administrative support jobs.
- The seniors' spring semester jobs were late coming in, and some students did not start working until the semester was well underway.
- Simulations of interviews and job situations were very favorably received by the students, who suggested that these be continued and that seniors also have the chance to visit the work sites of work experience employers to see how people dress and in general to ease the adjustment to the working world.

Dropouts. Of the 197 students who were enrolled in the Academies at the start of the 1983-84 school year, 162 (82%) completed the year. Thirty-five students either moved away, requested to drop out, or were dismissed from the program for inadequate performance.

Attempts were made to contact the 30 students who dropped either at their own request or at the request of the Academies. Telephone interviews were conducted with 21 (67%) of these exiting students; seven had no

telephone, and two were not willing to be interviewed. The table below indicates the number of students interviewed and the number of students dropping out, by reason for leaving and by grade level.

Reason:	Grade 10	11	12	TOTAL
Requested to drop:				
Number Interviewed	4	3	1	8
Total Number	6	3	2	11
Dropped by program:				
Number Interviewed	9	3	1	13
Total Number	11	7	1	19
Moved				
Number Interviewed	--	—	—	—
Total Number	1	3	1	5
TOTALS				
Interviewed	13	6	1	21
Dropped	18	13	4	35

We asked these 21 students their main reason for dropping (or being dropped) from the Academy. The eight students who requested to drop gave the following explanations:

- had difficulties with understanding because English was their second language (2)
- became bored with the lack of variety in classes and classmates (2)
- had to drop out of school for a semester to work because of family problems (1)
- changed career goal to commercial art (1)
- needed more required courses to prepare for university (1)
- left school in senior year because lacked credits to graduate (1)

The 13 students interviewed who were dropped by the Academies gave these reasons for the difficulties that led to their dismissal:

- poor attendance (4)
- did not do necessary work or live up to "contracts" for studying (3)
- lost interest in the subject and stopped working at it (2)
- distracted by personal problems at home (1)
- did not feel comfortable at the school (1)
- behaved badly in class (1)
- did not like the teachers and their "overprotective" attitudes (1)

We also read the students a list of 17 possible reasons for dropping and asked them to indicate which of these had been true for them:

	Yes	No	N/A
Program was too hard	3/15%	18/85%	
Program was too easy	3/10%	18/90%	
Disliked the subject	3/15%	18/85%	
Disliked the teacher(s)	6/25%	15/75%	
Disliked the other students	4/15%	17/85%	
Disliked having to change schools	1/5%	6/30%	14/65%
*Disliked the schedule	10/50%	11/50%	
Disliked the facilities	1/5%	20/95%	
*Disliked how the lab was taught	11/50%	10/50%	
Disliked how other subjects were taught	5/25%	16/75%	
Problems with homework	10/45%	11/55%	
*Problems with grades	15/70%	6/30%	
*Behavior/attendance problems	11/50%	10/50%	
Personal problems	5/20%	16/80%	
Interest in other activities	5/25%	16/75%	
Missed regular classes	8/40%	13/60%	
Missed other friends	9/40%	12/60%	

The problems that were acknowledged by 50% or more of those interviewed are starred and underscored.

All the dropped students had at least one positive thing to say about the program. Among their comments were:

"It's a good opportunity to meet people in industry."

"The teachers were friendly and the program was in order all the time."

"It's a good way to train for a good future."

"The extra help helped me pass the proficiencies."

"I liked being with friends in class."

"I learned to deal with people."

Other aspects of the program students appreciated were the field trips and the hands-on projects with computers and electronics.

The comments of students for whom the program did not work offer insights into how to improve the Academies. This year, the Electronics Academy lost a disproportionately high percentage of its incoming class. Of the 30 students who left the program for reasons other than moving away, 22 (73%) were from the Electronics Academy, and of these 14 (64%) were 10th graders. In fact, the 10th grade Electronics class lost nearly one-third (30%) of its members by the end of the school year. We asked all the exiting students for suggestions to improve the Academies. Eight of the ten Electronics 10th graders interviewed suggested changes in the electronics class, which was their biggest problem area. They complained the class was "over our heads," did not offer enough hands-on work, and presented very new concepts without clear explanations. In other words, the students could not understand or get excited about the subject that should have been their major incentive to working hard in school; on the contrary, students said they fell into patterns of poor attendance and bad study habits because this class was boring and frustrating.

Some of the other 10th graders were unhappy with the block scheduling of Academies students, which meant that some of them had to repeat math classes they had already passed and also that they would see the same group of students in all their classes. Some Academies students respond favorably to the intimacy of the small "school within a school", but others find the atmosphere stifling and feel the need for the flexibilty and freedom of a less rigid schedule.

Parents

This year's telephone survey included only parents of 10th grade students. This was done to keep down the overall number of parents surveyed, while still including parents of a representative number of students of different ethnicities and varying scholastic achievement. Twenty-seven parents were interviewed, which represents the parents of 33% of the combined 10th grade class.

Respondents to Parent Survey

	Electronics Academy (N = 13)	Computer Academy (N = 14)
Sex of Student		
Male	9	8
Female	4	6
Scholastic Achievement of Student		
Above average grades	7	6
Below average grades	6	7
(Dropped)	0	1
Family Ethnicity		
White	3	4
Black	6	6
Hispanic	4	3
Other	1	1

We asked parents to give a general rating of the Academies program, using a five-point scale of Excellent to Terrible. Twelve parents (44%) rated the program Excellent; 9 (33%) Good; 1 (4%) Average; and 5 (19%) said they didn't know enough about it to give a rating. The average rating, converting the ratings to a numerical scale (5 = Excellent, 1 = Terrible), was 4.5.

One of the goals of the Acadaemies is to keep parents informed about the program, and we therefore asked the parents about their understanding of various aspects of the Academies. Their answers indicated whether or not they were knowledgable about the Academies' basic purpose, class schedule, duration, and instructional content.

	Yes	No
Parents knowledgeable about:		
The program's basic purpose	19/70%	8/30%
How the class schedule differs	11/41%	16/59%
The length of the program	18/67%	9/33%
Basic content of lab instruction	19/70%	8/30%

Over half of these parents were at least minimally informed about the program; but almost a third of them had either no notion or only a very vague one of what the Academies are all about. Three parents said they knew nothing at all about the goals or content of the program. Nevertheless, almost all the parents knew at least that the Academies were training their children in occupational skills and helping them plan a future career.

Parents were asked about the impact of the program on their children, in terms of attitude toward school and self-esteem.

	Strongly Increased	Slightly Increased	No Effect	Slightly Decreased	Strongly Decreased	Don't Know
Student's interest in school and learning	12/44%	10/37%	5/19%	--	--	--
Student's self-esteem	11/41%	6/22%	7/26%	--	--	3/11%

Parents were especially positive about their children's increased interest in school, making such comments as, "It made my son more responsible," and "She has an incentive now and never wants to miss class." Three parents (11%) said they had noted a greatly improved attitude toward school but only in the subjects taught by the Academies; they hoped that this attitude would spread to school and learning in general.

Although we talked to some parents who were less than well informed about the details of the program, there was not one who did not like the Academies and feel it was good for her/his child. Even parents whose children were struggling in school (and had dropped or may soon drop out of the program) were positive about its goals and methods. We asked parents what the outstanding strengths of the program are; responses focussed on the following six areas:

- It gives the students direction, motivation, and a sense of responsibility; there is good discipline and a serious approach.
- It trains the students in useful vocational skills and prepares them for the future.
- The teachers and counselors believe in the students and really help them.
- The classes (both technical and academic) are small and interesting and keep the students wanting to attend.
- There is a sense of unity and cooperation among students and staff.
- The industry presence--field trips and mentors--makes it special.

Parents were asked to rate the quality of the facilities, equipment, materials, and instruction. While many parents (25-50%) said they did not know enough about the Academies to comment on various specific aspects of the program, the rest gave mostly Good to Excellent ratings. Some parents had additional comments, which included wanting more lab equipment, more homework assignments, less crowded classrooms, and easier books for the students for whom English is a second language. One parent asked if there was a shortage of books, since her child "never brings any books home."

We also asked the parents about how well the Academies staff keep them informed about their children and about the program itself.

	Very Well	Moderately Well	Poorly/ Not at all
How well does the Academy staff keep you informed about your child's progress?	16/59%	8/30%	3/11%

	Yes	No
Do you receive regular communications about Academy activities?	15/55%	12/44%

Responses to these questions are similar to those given by parents last year and indicate that there is room for improvement in communication. Two parents said they never knew their children were having problems in school until the "cinch" notices (official warning notices) were sent home; they would have appreciated earlier calls from teachers. Some parents said they were only kept informed because they took the initiative and called either the school or the Coalition for information. Spanish-speaking parents said all the communications were in English, and they would prefer Spanish if this were possible. (Two of the parent interviews were conducted in Spanish.)

We also talked with parents about the program's effect on their children's career planning. Three questions dealt with this aspect of the program.

	Strongly Improved	Slightly Improved	No Effect	Slightly Decreased	Strongly Decreased	Don't Know
Has the Academy improved your child's knowledge of career possibilities?	13/48%	5/19%	8/30%	—	—	1/4%

	Yes	No	Not Sure
Have you discussed with your child his/her plans for what to do after graduation?	21/78%	6/22%	--
If so, do you feel he/she is moving satisfactorily toward a career/education plan?	13/61%	4/19%	4/19%

The negative responses were mainly from parents who said that 10th grade was too early to seriously consider career plans. Nevertheless, many parents said their children were already working (one boy works 8-hour shifts all weekend plus several hours after school every day), and these parents are pleased that their children are looking toward better jobs than they now have. A few parents worried that their children were forming unrealistic career goals, considering their past school performance.

As a measure of how well parents have been drawn into the program, we asked parents if they had been able to work with their children in a variety of specific ways. Responses show that over two-thirds of the parents actively support their children in the Academies at home, but they have seldom helped with any program-related activities at school. Seven parents (26%) said they would have been glad to help but were never asked; others commented that they were not informed about program activities.

	Yes	No
Helped your child decide to enter this program	21/78%	6/22%
Helped your child with homework assignments from the program	18/67%	9/33%
Had discussions with teachers or counselors in the program	19/70%	8/30%
Helped in counseling your child about a program-related problem	21/78%	6/22%
Attended any school functions related to the program	17/63%	10/37%
Helped with any program-related activities (e.g., field trips, school activities)	3/11%	24/89%

Finally, parents were asked to comment on <u>problem areas</u> in the program and to make <u>suggestions for improvements</u>. Fifteen parents (56%) said they were not aware of any weaknesses in the program. The others pointed out problems in four main areas:

- Communications: Parents don't receive enough information; some teachers are difficult to communicate with.

- Structure: The program is too segregated from the regular school and has the reputation among other teachers of being a remedial program; it lacks prestige at the school; there is not enough flexibility in the schedule to allow for college prep requirements.

- Classes: Some classes are over the heads of the students; students are not given enough extra help.

- Motivation: The program needs to do more (possibly more field trips) to motivate students.

The parents' suggestions for improvements followed along similar lines:

- Communication: Mail a regular newsletter home to parents and include a Spanish translation if possible; make it clear to parents whom to contact for questions and problems; have group meetings of parents and teachers once a quarter (preferably in the evening); plan a parent field trip so they, too, can see what industry is like.

- Structure: Expand the Academies to include more students; add social science and even physical education to the Academies program.

- Classes: Screen teachers carefully to be sure they are the best; give more homework and make classes more challenging; acquire more computers.

- Motivation: Plan joint activities for the two Academies combined (like the graduation ceremony at Hewlett-Packard); develop more effective strategies to get the students to take school and careers more seriously.

School Personnel

This year, responsibility for managing the day-to-day implementation of the Academies shifted away from the Urban Coalition and toward the schools; thus, teachers and school administrators became even more important to the success of the program. The department chairpersons worked closely with their school administrators and the district Director of Special Projects to operate the program in the schools, coordinating their efforts with those of the UC-based Academies Director and Coordinator, who handled the industry support component.

We interviewed seven people from each Academy school and one from the district office. A total of 15 individuals, including three administrators, two counselors, and 10 teachers shared their views. The 29-item interview guide used in the previous Academy evaluations structured the survey.

Overall impressions. In each of the past three years, we have asked school personnel to rate the concept and implementation of the Academies program, using a scale of one to seven (1 = very weak, 7 = very strong). The average ratings for implementation have risen each year and now indicate a generally high level of satisfaction with the program.

	1981-1982 (N=16)	1982-1983 (N=21)	1983-1984 (N=15)
Rating of program:			
In concept	6.4	6.1	6.9
As implemented	4.6	4.7	5.5

School personnel also gave high marks this year to the planning and management of the program, which were rated Excellent by 33%, Good by 53%, and Average by 13% of respondents.

Management. In last year's survey, there was considerable divergence of views over who was actually managing the Academies, but this year, two-thirds of the interviewees agreed that the program's good management was attributable to the two Academies department chairpersons. (Those who did not name the chairpersons as the responsible managers said the program was run by the Steering Committee, the District Director of Special Projects, the Academies Director and the UC, or by the teachers and counselors.) Most teachers perceived a management structure where the chairpersons manage the school program and the Academies Director and district administrator take responsibility for funding the program. It appears that lines of communication and division of authority were clearer this year than in the past, as management has fallen into this recognizable pattern.

School personnel were generally satisfied with the feedback they received, such as the evaluation reports, reports on Steering Committee activities, and the like. Nevertheless, the staff voiced concerns about

some aspects of the management this year. First, teachers said they would like to have more time, probably in the summer, to develop curriculum and work on alternate strategies for motivating students and dealing with behavior problems. Second, in terms of overall management, some of those interviewed said that improvements were needed in coordination and communication between the Academies teachers, the UC staff, and the school administrators. Third, some teachers were concerned about funding for the coming years and suggested that the Academies might be top-heavy with administrators whose salaries might be better spent on the teaching staff, who will bring essential stability to the program in the long run. Finally, teachers were concerned about the effect on the Academies of the recent district decision to eliminate the school counseling program in the coming year.

Other items in the interview related to program management dealt with general support for the program among parents, non-Academy teachers, and SUHSD administrators.

		Very Supportive	Somewhat Supportive	Slightly Supportive	Non-Supportive	Don't Know
How supportive of the Academies Program are						
Parents of Academy Students?	1983	7/33%	6/29%	4/19%	—	4/19%
	1984	10/67%	4/27%	--	--	1/7%
Other teachers and counselors at the School?	1983	--	2/14%	5/33%	3/20%	5/33%
	1984	7/47%	6/40%	1/7%	--	1/7%
School administrators?	1983	7/47%	1/7%	2/14%	1/7%	4/27%
	1984	15/100%	--	--	--	--
District administrators?	1983	8/53%	2/14%	--	--	5/33%
	1984	14/93%	--	--	--	1/7%

Everyone interviewed agreed there was a great improvement in support for the Academies this year, especially at the school level. The estimated percent of Very Supportive parents increased from one-third to two-thirds this year. Even more dramatic was the increase in non-Academies teachers' support. Some teachers mentioned as an indication of growing appreciation

of the Academies program the fact that this spring the ninth-grade teachers and counselors recommended over one hundred students for the program. The Academies staff attributed this change of attitude to (1) their own efforts to inform their colleagues about the Academies' goals and funding sources, and (2) the non-Academy teachers' observations of improved performance by Academy students.

Academies staff also felt that school and district administrators were strongly behind the program, especially because the program won awards for excellence from the district and received statewide recognition at a time when the SUHSD is experiencing financial difficulties and program cutbacks.

Staffing changes and turnover have been a problem for the Academies since their inception. Only one teacher has been with the program its entire three year lifetime. This year there were four new teachers, three starting in September and one in January. We asked school personnel to rate the orientation these teachers received to the Academies' goals, strategies, policies, etc.

Rating of Orientation by	Excellent (5 points)	Good (4 points)	Average (3 points)	Poor (2 points)	Non-Existent (1 point)	Average Rating
New teachers (N = 4)	1	1	1	--	1	3.25
Other personnel (N = 9)	3	6	--	--	--	4.3

Note that the average rating given by the new teachers themselves was lower than that given by the rest of the staff. Everyone agreed that the weekly staff meetings provided valuable opportunities for orientation and that there was little time available before the start of school in the fall for any kind of introduction to the program. One new teacher suggested that a booklet be prepared summarizing the program and its policies from a teacher's perspective.

Instructional program. School personnel were asked to rate and comment upon the quality of the curriculum and the planning and management of the instructional aspects of the program. Responses are presented here for the two Academies separately, with the district administrator's responses recorded for each, making a total of 8 respondents for each Academy.

	Excellent	Good	Average	Poor	Terrible	Don't Know
Quality of lab curriculum						
Computer	3/38%	4/50%	1/12%	--	--	--
Electronics	2/25%	6/75%	--	--	--	--
Quality of planning and management of instruction in lab classes						
Computer	5/62%	3/38%	--	--	--	--
Electronics	--	4/50%	2/25%	2/25%	--	--
Quality of planning and management of instruction in academic classes						
Computer	1/12%	5/62%	1/12%	--	--	1/12%
Electronics	3/38%	3/38%	1/12%	--	--	1/12%

Several teachers had difficulty giving overall ratings in each category because of (1) changes in teachers that occurred mid-year; and (2) different instructors for the same subject (e.g., math, science, and lab) at different grade levels. Teachers at both Academies said that each teacher is basically responsible for his/her own curriculum and instructional planning.

One of the original objectives of the Academies was "to provide academic instruction...related to the vocational instruction...." The five classroom teachers at each Academy were asked how often they structured their classes to mesh with or complement the other Academies classes. Teachers at both schools said they valued their daily common preparation period, which allowed them to work together effectively as a team. At the Electronics Academy, the three academic teachers all had designed specific units that dealt directly with either employability skills or with electronics. (Units included special vocabulary-building in English; energy-related experiments in science; and powers of ten, ratios, and proportion in math.) At the Computer Academy, however, all those interviewed said that the

Academy's academic courses were not substantially different from those taught in the regular high school program. The teachers did not express a need for a more integrated approach; both the science and English teachers said their lessons seldom if ever dealt with work-related concepts, and the math teacher said she only occasionally gave extra credit assignments that tied into computer work. Employability skills and career education were covered in the computer lab rather than in English or the other academic classes. These survey findings suggest that the idea of an integrated curriculum which was the original intent of the program should be re-examined by the Academies' policymakers.

The Academies' ten classroom teachers were also asked about two other Academy objectives dealing with the instructional program: (1) the inclusion of career-related motivational activities such as field trips, speakers, and classroom discussions; and (2) providing individual instructional assistance.

	At Least Once a Week	Once/ Twice a Month	Once/ Twice a Semester	Never
During the last year, how frequently have motivational activities taken place? (Examples were given)	3/30%	3/30%	2/20%	2/20%

Compared to last year, when 88% said that "motivational" activities occurred at least once or twice a month, there appear to have been fewer such activities this year. Those responses concur with the students' perceptions reported earlier in this chapter. Most teachers said that field trips and the like were very useful when they occurred--with certain reservations. They noted that field trips can be a waste of time if they are not well planned and students are not prepared in advance. There was some disagreement about the value of field trips for seniors, with some teachers saying seniors don't need them because they are already motivated, and others saying that seniors get more out of trips than the younger students because work is more real to them and they have personally important questions that such trips can answer. One teacher commented that field trips are at least as educational for industry personnel as for students, because they increase the private sector's awareness of what the schools are doing.

Last year we noted a difference of opinion between teachers and students about the availability of extra instructional help or tutoring. This year, the difference is less. In the summary of the student survey earlier in this chapter, we noted that 80% of the students said help was available to them at least once a week, and 67% said their needs for extra assistance were met. The teachers' responses corroborate this impression.

	At least once a week	Once or twice a month	Once or twice a semester
How often have you made individual instructional attention available to your students? (Examples were given.)	9/90%	1/10%	--

	Yes	No	Partly
Do you feel that student demand for individual instruction was met by the program this year?	13/87%	1/7%	1/7%

Most teachers said they were available for tutoring on a daily basis. However, many also commented that the students with the worst problems were the least likely to seek help and that the staff must take active steps to give extra help, even when it is not requested. They emphasized the importance of small classes and the value of in-class peer tutoring, which is especially suitable to the science and technology classes. Special study halls for students with academic problems were tried at both Academies this year, with mixed results.

Industry involvement. We asked the school personnel about their perceptions of business and industry involvement this year. Had cooperation between the schools and industry increased? Responses were about equally divided between "Yes" and "No," with some teachers citing more positive business attitudes as a result of the successful summer jobs program and others sensing that "companies are less involved and committed than they were at first." Seven of the 15 individuals interviewed could cite an example of contact with industry personnel this year. Examples included:

- more active mentors (mentioned by 3 teachers)
- more involvement by business members on the Steering Committee (2)
- speakers and visitors in classrooms from industry (1)
- staff-industry luncheons at the schools (1)

Asked about their attitudes now toward the business community compared to before their Academies involvement, five (33%) of the school personnel said they have more understanding and appreciation of the private sector than before. One person commented that he had never paid much attention to industry but now follows the news about the ups and downs of local industry and the job market. One respondent said his attitude toward the business community had deteriorated because he felt companies were not following through promptly with commitments such as the student jobs. The remaining nine (60%) reported no change in their attitudes.

Finally, school personnel rated the quality of various day-to-day aspects of the program--classroom facilities, equipment, and materials:

		Excellent	Good	Average	Poor	Terrible	Don't Know
How would you rate the quality of the:							
Facilities:	Computer	1/12%	5/62%	1/12%	1/12%	--	--
	Electronics	--	4/50%	3/38%	--	--	1/12%
Equipment:	Computer	3/38%	3/38%	1/12%	--	--	2/25%
	Electronics	--	5/62%	2/25%	1/12%	--	--
Books and learning materials:	Computer	4/50%	2/25%	--	--	--	2/25%
	Electronics	4/50%	3/38%	1/12%	--	--	--

Teachers and administrators appear to be equally well satisfied with books and teaching materials at both schools, but less happy with the equipment and classroom facilities at the Electronics Academy. Teachers at this Academy were pleased about plans to move into different classrooms and remodel others for next year. However, their most serious reservations were

expressed about the equipment in the lab, which many felt needed culling, updating, and, most of all, improved maintenance. This perception correlated closely with students' views.

Counseling. Students actively used the services of the two Academies counselors and also frequently consulted teachers for advice on school or career planning, according to the results of the school personnel survey. The counselor at the Electronics Academy estimated he saw about one-third of the students for individual counseling at least once a week; another third about once or twice a month; and the reamining third about once or twice a semester. The Computer Academy counselor estimated that about 10% of the students came to see him at least once a week; 20% once or twice a month; about 60% once or twice a semester; and the remaining 10% saw him only in group or class counseling situations.

The Academies teachers also reported doing a considerable amount of informal counseling, which we defined as having specific discussions on a one-to-one basis about career, school, or personal issues. Seven of the 10 teachers interviewed said they saw about half the Acadaemies students on this basis once or twice a semester; half the teachers said they saw about a third of the students as often as once a week.

Students and attitudes. Last year we asked school personnel to describe the type of students for whom the Academies are most appropriate. This year we asked if the students enrolled met that description. Eighty percent of the respondents said "Yes." The two teachers who responded "No" felt that this year's incoming 10th grade class had for some reason been unsatisfactory. In fact, most of the teachers interviewed commented that the sophomore classes had not been well-enough screened in terms of motivation, attendance, and behavior. While the intent is to find students with problems in these areas, it is also to find students who will change through the program, and it is difficult to predict which students will reverse their previously poor behavior patterns. While the program can probably expect to misjudge about 10% of the time, the selection process nevertheless needs to avoid having substantial proportions of a class drop in the first year. "Perfect procedures" for admissions are impossible to

achieve, but several teachers said that students who persist in poor school performance in the 9th grade after being selected for the program should not be admitted, but should be replaced by more serious students from a waiting list, assuming that selection is made at the end of the third quarter. All the teachers felt that the students selected for the program were consistent with the Academy's objective of enrolling disadvantaged youngsters who lack motivation. As one teacher said, "We selected the right kids, but for some the program did not meet their needs." Another teacher took a philosophical approach: "If we select bad actors, there will inevitably be a lot of drops. If only a few succeed, we've done well."

We also asked school personnel if they were satisfied with the Academy criteria and procedures for dropping students, and 73% said they were. The teachers agreed they had made serious efforts to help problem students before dropping them. They also stressed the importance of the leverage that dropping-power gives teachers in dealing with behavior problems. Of the four interviewees (27%) who were not satisfied with dropping procedures, three wanted stricter standards and faster action on dropping uncooperative students. They were worried about sacrificing serious students--and teachers--for the sake of a few troublemakers. Only one respondent felt that the Academies staff should look harder at the reasons behind student misbehavior and lack of motivation, instead of putting the burden of "shaping up" on the students alone.

Teachers were asked to estimate the effects of the Academies program on student attitudes.

	Average Estimated Percentage of Students		
	Increased	No Change	Decreased
What percent of students in the program have changed their attitudes about school and learning?	70%	26%	4%
What percent of students have changed their self-esteem?	80%	19%	1%

Weaknesses and strengths. Finally, teachers discussed their views on the program's weakest and strongest components this year. The most frequently mentioned problems (and the percent of respondents mentioning each) were as follows:

- poor instructional planning in some lab classes (40%)
- instability in the staffing--midyear changes and uncertainties about the future (40%)
- poor selection of the 10th grade class and the consequent discipline problems

Other problems mentioned were inefficient coordination of the work experience jobs for seniors; losing and not replacing the stockroom aide in the electronics lab; insufficient extra-curricular activities to give students a sense of unity; and funding uncertainties that made it necessary for administrators to spend more time on fund-raising than on planning.

There was strong agreement that the following were the most successful aspects of the program this year:

- the jobs program, summer and spring, which motivated students and added immensely to their educational experience (53%)
- the team spirit and cohesiveness of the staff, which was enhanced by the shared planning period and weekly staff meetings (40%)

Other successful program aspects mentioned were the cooperation and involvement of industry, having lab teachers with previous teaching experience, receiving recognition and awards for the program, and the successes of the graduating seniors.

Private Sector Participants

Thirty-nine companies contributed to the Peninsula Academies this year. In addition to providing monetary support and work opportunities for the students, many companies encouraged their employees to give their time and energies to the program. Company employees served on the Executive and

Steering Committees, acted as mentors for the students, and supervised students as they worked at their industry jobs.

We interviewed 26 industry employees who participated in the Academies: 2 Executive Committee members; 6 Steering Committee members; 10 mentors; and 8 job supervisors. The committee members respresented all active industry members. The mentors were selected from among the 59 mentor volunteers using a sampling design that called for representative numbers of mentors from each Academy and also at least one mentor from each participating company; supervisors were selected in a similar manner. The interviews followed the same guidelines used in the two previous evaluations and were conducted by telephone. Survey results are presented here first for mentors, then for supervisors, and, finally, for committee members; for selected items, all industry participants are combined.

Mentors. Altogether, 12 mentors were interviewed (10 whose only connection with the Academes was as mentors, one who was also a committee member, and one who was also a job supervisor). We asked what kinds of activities they had shared with their student mentees. The most frequently mentioned outing was a tour of the industrial plant and the mentor's office, followed by lunch or dinner and a discussion of careers. Several mentors also visited the Academy classrooms or came to a school openhouse with their students. Other activities included going to movies or sporting events, visiting college campuses, or attending an industry trade show, such as a computer "fair."

Most of the mentors interviewed were excited about the program. However, 2 of the 12 mentors in the sample asked not to continue the interview because they had not followed through with their mentoring commitments, having had unexpected changes in their own jobs.

Many mentors who were interviewed in the spring of 1983 expressed concern about the lack of structure in the Academies mentor program and the need for better communications between themselves and the Academies staff. This year, while about 75% of the mentors interviewed said they were pleased with the overall management of the program, they again suggested that more

follow-up and feedback on their activities were needed. They wanted more communication with teachers to find out whether their activities are "on track," to learn more about how to help their mentees, and to share their insights with the teachers. They suggested that mentors and Academy teachers meet midway through the school year to discuss how best to work with individual students. They also would like to see an Academy newsletter that would include feedback from students on the mentoring and suggestions for interesting and appropriate activities. All in all, mentors once again this year felt they were not getting enough feedback on the Academies; 40% of them said they never received newsletters or reports, although they had telephone communications with the Program Coordinator or conversations with their company's liaison to the Academies.

Summing up the mentor interviews, their most frequently mentioned concern was the lack of structure. Some also commented that their students were passive and therefore difficult to develop a relationship with, or that the parents of some mentees were resistant to the mentoring. Faced with such problems, mentors would like more "moral support" from the Academies staff to help them follow through with what sometimes turned out to be a difficult and challenging commitment.

Supervisors. We interviewed 8 student work supervisors and 5 mentors or committee members who had also either hired or supervised Academy students.

We asked these 13 individuals to rate the performance of the students on eight factors.

	Very High	High	Average	Low	Don't Know
Academic skills/critical thinking	2/15%	4/31%	4/31%	--	3/23%
Vocational/technical skills	4/31%	5/38%	3/23%	--	2/15%
*Dependability	8/62%	4/31%	2/15%	--	--
Appearance and dress	5/38%	2/15%	5/38%	1/8%	--
Language/speech mannerisms	2/15%	7/54%	4/31%	--	--
*Attitude	7/54%	5/38%	1/8%	--	--
General job preparation	3/23%	6/46%	3/23%	1/8%	--
*Overall job performance	7/54%	5/38%	1/8%	--	--

The factors that were rated "Very High" are starred and underscored. It is encouraging that students received the highest ratings on Dependability and Attitude, when these were the very factors deemed most important in an employer's decision to hire a new employee (see page 49).

We asked the supervisors to describe their general reactions to the students as employees. All gave positive assessments and said they were very satisfied with the students. Among their comments were:

"Minimal training was needed. I was surprised."

"We're strict, but the kids measured up."

"[Student] came to work late, but after we spoke to him about it, he was all right."

"Very dependable and amazingly well prepared."

"They are highly motivated and are good employees."

"Enthusiastic and diligent, but skills are low for the kind of work this company does."

"They are hard workers, good dressers, very dependable, and very motivated."

"High electronics skills, but not so good in research."

"He just jumps in and works and doesn't waste time. He'll be one of our key employees down the road."

The job supervisors had only a few problems and concerns about the Academies program. Some mentioned they would like more information about the goals and structure of the overall program, so that they could better understand their own roles. Others expressed some concern that some of the students' jobs were not relevant to their technical training. However, they remarked that better placements would be impossible at some companies because the technical jobs available are complex and call for someone who has more experience and also can stay on the job longer than is possible for the Academy students.

Committee members and combined private sector representatives. We asked the industry employees about the reasons for their company's involvement in the Peninsula Academies. Ten respondents (36%) said their companies were interested in the program because they see it as a way to train future employees; 13 (50%) said the company was mostly concerned about performing a worthwhile community service or helping students who need extra support. Three (11%) said their companies' contributions were motivated by the desire to build good public relations among potential customers for their products. One said his company was challenged to create a model business-school partnership. Finally, one respondent said his company was involved because "helping young people builds a future for the country and the company."

The individuals interviewed had worked with the Academies in a variety of roles. Besides serving on committees and working as mentors, they coordinated the summer hire and work experience programs in their firms, organized and conducted company tours for student field trips, served as the company's liaison between mentors and the Coalition coordinator, wrote letters of support for the Academies, supervised and evaluated student workers, and worked on plans for replicating the Academies in other school districts.

All 26 interviewees were asked to rate the Academies, first in concept and then as implemented over the past year, using a seven-point scale (1 = very weak, 7 = very strong). The average rating for concept was 6.6;

the average rating for implementation was 5.5. Both average ratings are higher than those given by the 20 private sector participants interviewed last year.

Several parts of our interview focused on the effectiveness of program management and planning. Interviewees were asked who, in their opinion, took primary responsibility for the Academies' overall planning and management. Responses were as follows:

Response	N/%	Type of Respondent
Department Chairperson	5/19%	Mentors and committee members
Academies Director/Urban Coalition	9/35%	Mentors and committee members
Steering Committee and Executive Committee	2/8%	Committee members
Urban Coalition Coordinator	6/23%	Job supervisors
Parents/Students/Teachers	1/4%	Mentor
Don't Know	3/12%	Mentors and supervisors

These responses indicate that whereas committee members [accurately] viewed the program as being managed by the two Academies chairpersons working with the Program Director, the mentors and job supervisors tended to think the program was managed by the Coalition Program Coordinator--the person with whom they had contact. Responses to some other questions in the survey also suggest that some industry participants did not have a clear idea of exactly what the Academies are, who runs them, and what their relationship is to the public schools. (See pages 47 and 50.)

The survey also tapped industry personnel's perceptions of the effectiveness of overall planning and management.

	Excellent	Good	Average	Poor	Terrible/ Non-Existent	Don't Know
How effective do you feel overall program planning and management for the Academies has been?						
Committee members	5/63%	2/25%	--	--	--	1/13%
Mentors	2/20%	5/50%	2/20%	1/10%	--	--
Supervisors	5/63%	--	1/13%	--	--	2/25%
Total (N = 26)	12/46%	7/27%	3/12%	1/4%	--	3/12%

Several comments and suggestions were made about program management. Interviewees praised the program's current leadership and said that while it is a good idea for the schools to assume more leadership, it is not yet time for the Coalition to phase out its role. Some committee members were concerned that the Executive Committee did not take as active a role this year as had been expected when the Academies were founded, and a suggestion was made that this committee be phased out now that the program is becoming institutionalized in the school district. As one respondent noted, top management can be less involved now that middle management is more involved. Another committee member suggested that the appropriate continuing role of industry is to provide only those components that the school district (with the help of the state) is incapable of supplying, such as mentors, field trip sites, and job opportunities.

To get a measure of the level of personal contact between industry and school personnel, we asked the committee members and mentors if such contacts and cooperation had increased this year. Eight respondents (44%) said "No," and could not give an example of personal contact with school personnel except at large meetings. Two (11%) weren't sure if contacts had increased, and eight (44%) said "Yes," such contacts had increased. This group cited as examples: meeting and talking with teachers during school open houses or classroom visits, discussing student concerns with teachers and counselors, interactions at Steering Committee Task Force meetings, attending industry-

school luncheons, and working together to set up the jobs program. The suggestion was made that industry personnel would welcome more contact initiated by the schools.

All industry participants were asked if their attitude toward the public schools in this community had changed as a result of their involvement with the Academies.

	Improved	About the Same Positive	About the Same Neutral or Negative	Worse than Before	No Response
What is your attitude now compared to before involvement with the Academies?	12/46%	4/15%	7/27%	1/4%	2/8%

Most of the respondents whose attitudes had remained neutral or negative or had deteriorated were the job supervisors, who said that while the Academies program is a good one, it stands in contrast to the rest of public education and has not yet caused them to alter their overall assessment of the schools. Six of the 8 supervisors felt the schools are "in bad shape" because they aren't strict enough and don't sufficiently stress the basics. They viewed the Academies as a step in the right direction, but some were not sure if the Academies were part of the public schools or not.

The survey also offered an opportunity to find out if industry personnel think the Academies curriculum is adequate and also to learn what "employability skills" they think are important to instill in the students.

The 26 private sector representatives were asked to comment on the technical and academic curriculum, with these results.

	Yes	No	Don't Know
Does the curriculum provide the students with the skills needed by companies?			
Technical Curriculum	15/58%	3/12%	8/31%
Academic Curriculum	10/39%	2/8%	14/54%

Although the majority of respondents thought the curriculum was generally satisfactory, the following changes were suggested to strengthen it:

Technical Curriculum:

- Include a course in computer programming (BASIC) in the Electronics Academy.
- Give Computer Academy students an overview of higher-level languages.
- Give electronics students more information on quality-related topics.
- Encourage electronics students to plan and carry out their own projects and to take up hobbies related to electronics.
- Include word processing and typing in the Computer Academy curriculum.
- In general, keep current on the latest equipment and techniques by having more industry presence in the classrooms.

"Employability" Skills:

- Teach students how to dress properly at work.
- Teach students how to ask information-seeking questions to make them more active participants in their own education.
- Help students with their interpersonal skills.

Academic Curriculum:

- Use computer-assisted instruction to supplement instruction in math and English.
- Work on oral communication skills for making presentations.
- Place more emphasis on the basic skills.

Industry personnel also rated the utility of the "motivational" activities for Academy students, as follows:

Activity	Highly Useful	Somewhat Useful	Not Useful	Don't Know
Field trips to businesses	13/50%	8/31%	--	5/19%
Business presentations in the schools	5/19%	8/31%	1/4%	12/46%
Mentor program	13/50%	7/27%	--	6/23%
Summer employment	20/77%	1/4%	--	5/19%
Parttime work experience	18/69%	1/4%	--	7/27%

To help guide the Academies' career guidance efforts, we asked the industry participants again this year to rate the importance of ten factors that an employer might consider when hiring a recent high school graduate. The characteristics that are starred and underscored in the list that follows were selected as "Very Important" by 75% or more of the respondents.

Activity	Very Important	Somewhat Important	Not Important	Don't Know
Previous work experience	4/15%	12/46%	10/38%	--
Appearance and dress	14/54%	11/42%	1/4%	--
Language/speech mannerisms	15/58%	9/35%	2/8%	--
Physical strength and endurance	2/8%	6/23%	17/65%	1/4%
Academic record	12/46%	12/46%	1/4%	1/4%
References	10/38%	11/42%	5/19%	--
Vocational or technical skills	16/62%	9/35%	1/4%	--
*Job motivation and enthusiasm	24/92%	2/8%	--	
*Dependability	24/92%	1/4%	--	1/4%
*Ability to get along with others	20/77%	6/23%	--	--

Since industry personnel have now become involved in the Academies beyond the policy level, we were interested to discover whether the Academy students they encountered met their expectations in terms of their understanding of the Academies' goals. We asked whether, in their opinion,

the students represent the population the program was designed to serve. A positive response was given by 21 (81%) of those interviewed; 2 (8%) said "No" the students were not what they expected to see; and 3 (11%) said they had not met enough students to respond. The two negative responses were given by mentors who said that some students were not sufficiently committed to a career in the chosen field and that entrance standards should be raised. One of these mentors and one supervisor had the misconception that the Academies were designed to serve "the better students." However, most of the private sector employees interviewed recognized that the Academies were designed to serve students who, as one mentor/committee member put it, "might not have a chance for success otherwise."

Finally, we asked what these industry participants thought were the strongest components of the Academies program this year. Responses reflect the point of view of each group interviewed.

Committee members:

- the dedication of the school district and Coalition staff
- the leadership of the department chairpersons and the cooperation between the Academies teachers and the rest of the school staff
- the commitment of the students
- the work experience program

Mentors:

- the introduction of the students to the reality of the workplace
- the contribution mentors make to the students' development
- the chance for students to acquire practical skills and expand their horizons from the limited school experience
- the fact that the program starts in 10th grade instead of waiting until 12th grade, when it might be too late to help students

Supervisors:

- the exposure of students to the "real world"
- the technical training for the students
- the students' sense of responsibility, along with their good manners, appearance, and motivation

Suggestions. Industry participants made suggestions for improvements in the Academies in five areas:

Funding:

- Work at getting grants that span a multi-year period, so that program administrators are not burdened with constant fund-raising.

Program Management:

- Publicize the program to build support from industries that are located closer to the school district (i.e., in San Mateo County).
- Develop a consistent system for generating part-time and summer work experience positions, so that industry will have jobs lined up promptly when then are needed.
- Involve more companies in the summer hire program.
- Reconsider whether the Executive Committee is still needed.
- Match mentors and students on the basis of where they live to minimize transportation problems.

Implementation--School level:

- Prepare students to take an active role in the program, taking more responsibility for their own decisions and giving them more sense of ownership in the program.
- Ease the transition between school and work by having more field trips and assigning more relevant readings.
- Invite industry employees to teach two-week units in the labs (working alongside the regular teachers).
- Strengthen the basic skills program in English and math.
- Require students in the Computer Academy to take typing.

Implementation--Industry component:

- Be sure that field trips include actual tours of the workplace, not just lectures.
- Instead of field trips for 12th graders, arrange for them to meet in small groups with industry supervisors.
- Make an effort to place students in jobs that are relevant to their training.

Feedback:

- Give industry participants more written information on the program.

IV. Conclusions and Recommendations

The Peninsula Academies program has completed its first three years with many successes to its credit. Thirty-eight Academies seniors graduated and went out to work in local industry and/or to attend post-secondary schools;* and a new class of over 80 sophomores will enter the program in the fall.

This chapter summarizes the evaluation findings for the 1983-84 school year and presents recommendations based on by the evaluation results.

Impact on Students

Attendance rates continued to be good for Academies students compared to the overall rates at their host high schools. The average attendance rate for Computer Academy students was 87%, compared to 80% for the school as a whole; the rate was 89% for Electronics Academy students, compared to 76% for the school as a whole. Fewer differences, however, were found in comparing Academies students' attendance (number of "cut" days) with that of the non-Academies comparison groups selected for this evaluation.

Academy students were earning as many or more school credits per semester as non-Academy comparison students, with the differences reaching statistically significant proportions in both the 11th and 12th grades. In addition, Academy students had higher pass rates on proficiency tests in reading, math, and writing than the comparison groups, and they also achieved slightly higher scores on those tests in all cases except for 12th grade math.

The program is also functioning well as measured by the "staying power" of its students. Attrition from the program—that is, students dropping out of the Academies and back into the regular high school program--dropped to

* At this writing, approximately half of the graduates had been placed in permanent, fulltime jobs; one third were planning to attend school fulltime in the fall; and the rest were in the process of interviewing for employment. These numbers will be examined in detail in AIR's final evaluation report, to be completed in December of 1984.

15% of the original fall enrollment this year, compared to 37% and 23% in the two preceding years. The program also appears to have had a positive influence on the students' decision to remain in high school. For example, only 3% of 11th grade Academies students who dropped out of the program this year also dropped out of school, while 15% of the non-Academies comparison group dropped out of school.

Results from the student questionnaires reveal that a large majority of Academies students liked the program better than the regular school program and also thought their attitudes about themselves and about school improved as a result of their involvement in the Academies. In a sense, the true test of the success of the Academies for the students comes in the work experience component of the program. A majority of the seniors who participated in the work experience reported they felt well prepared by the Academies to deal with their jobs in terms of both work skills and "employability" skills. In addition, over 75% of them were recommended by their supervisors for future employment at the companies where they worked.

Program Implementation

Results from this spring's surveys of students, parents, school personnel, and private sector participants show generally positive ratings of the Academies' curriculum, instruction, and school facilities. The facilities and learning materials were rated Excellent or Good at both Academies by the majority of students and school personnel and also by almost all of the parents interviewed who felt knowledgeable enough to respond to that question. Other aspects of the program that were rated highly by most of the interviewees were the counseling program, the career education component, and the opportunities for extra tutoring or individual help with school work.

The summer jobs for juniors and spring semester work experience for seniors received outstanding ratings from both students and their industry supervisors. The majority of supervisors rated their Academy student employees highly on dependability, attitude, and overall job performance.

The survey revealed, however, that some aspects of the program still need improvement.

- The equipment at the Electronics Academy was found wanting by students and school personnel alike, who said much of it was outdated and poorly maintained. Both students and instructors mentioned the need for a lab assistant trained in electronics who could help maintain the equipment in good working order.

- The mentor program received mixed reviews. About half the industry participants said the mentor program was "highly useful," and about a third of the 11th graders said their mentors had been "very helpful." On the other hand, about 25% of the industry personnel interviewed said the mentor program was only "somewhat useful," and about the same number of students said their mentors had not been helpful and had not met their expectations.

Program Management

During the 1983-84 school year, the Academies became more integrated into the SUHSD, as school-based personnel took over more management functions and the Urban Coalition correspondingly reduced its management role, continuing, however, to coordinate industry involvement. Overall, program management was rated as Excellent or Good by over 80% of school personnel and by 73% of industry personnel interviewed. While lines of communication and authority were clearer this year than last, and school personnel were generally pleased with program coordination, room for improvement was mentioned regarding communication between the Academies managers (Director, Coordinator, and department chairpersons) and other involved groups, notably mentors, industry supervisors, school principals, and parents. For example:

- mentors would like more communication with teachers;

- supervisors would like more information on their place in the overall program structure;

- principals and vice principals would like to be more promptly informed of Academy plans that affect their schedules; and

- parents would like more information about activities and opportunities to work with the program.

Recommendations

Chapter III of this report presents the specific suggestions and recommendations for the Academy from each of the groups surveyed: enrolled students, dropout students, parents, school personnel, and industry representatives. In this section, some of the more salient recommendations are re-emphasized.

Equipment

- Invite a task force from industry to inspect the electronics lab equipment and make recommendations for improvements and possible industry donations.
- Hire an electronics stockroom aide to help maintain equipment.
- Find larger quarters, more appropriate furniture, and/or better wiring arrangements for the computer lab.
- Look into the possibility of acquiring personal computers for some Academies academic classrooms, to be used for computer assisted drills and practice.

Communications

- Prepare an Academies handbook that describes the program's purpose, structure, policies, and programs; distribute the booklet to new teachers, parents, mentors, and job supervisors.
- Mail out monthly short newsletters to program participants. The newsletters could be written by students with the help of parent volunteers (or by parents with the help of a few interested students). Include some items in Spanish and some of interest especially to mentors.

Motivation

- Schedule more industry speakers in the classrooms and other enrichment activities, especially at 10th grade level, where enthusiasm tends to wane during the year. (Summer jobs and work experience possibilities serve to motivate many 11th and 12th graders.)
- Adhere less rigidly to block schedules; mix up Academy students in their various classes, so they don't see the same faces all day.

- Encourage students to take more responsibility for the program, for example by forming a student government and holding Academy-wide meetings to discuss issues and activities.

Mentors

- Screen and select mentors carefully and inform potential mentors of the seriousness of a year-long commitment.
- Establish more contact between teachers and mentors, either by exchange of telephone numbers or periodic small group meetings.

Work Experience

- Start early in the fall semester to organize parttime jobs for seniors, so they can start working promptly in the spring semester.
- Increase efforts to develop jobs related to electronics and computer skills taught in the program.
- Schedule small-group field trips for seniors in the fall, when they can discuss jobs in detail with industry employees.

In conclusion, in its third year of implementation, the Academies program achieved many of its goals for students, parents, schools, and industry. Assuming that long term funding can be found and that industry, the Urban Coalition, and the schools wish to continue their cooperation, the Peninsula Academies should be able to build an even stronger program on the foundation of these early achievements.